U.S. Department of Commerce
National Institute of Standards and Technology
Gaithersburg, MD 20899

Certificate Number: 96-091

National Type Evaluation Program

Certificate of Conformance

for Weighing and Measuring Devices

For:

Load Cell
Bending Beam
Model: CB6 Series
n_{max}: 4000
Capacity: 20 kg to 200 kg

Accuracy Class: III

Submitted by:

Cardinal Scale Manufacturing Co.
203 E. Daugherty, PO Box 151
Webb City, MO 64870
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Contact: Stephen Langford

Standard Features and Options

Model	Capacity (kg)	v_{min} Single Cell	Minimum Dead Load (kg)
CB6-20kg	20	0.005	0.00
CB6-50kg*	50	0.012	0.00
CB6-100kg	100	0.024	0.00
CB6-200kg	200	0.048	0.00
* Load cell submitted for evaluation			

Number of wires: 4 wires
Excitation voltage: 10 Vdc
Nominal Output: 2.0 mV/V

Temperature Range: -10 °C to 40 °C (14 °F to 104 °F)

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: July 2, 1996

Gilbert M. Ugiansky, Ph.D.
Chief, Office of Weights and Measures
Issue Date: August 8, 1996

Cardinal Scale Manufacturing Co.
Bending Beam Load Cell
Model: CB6 Series

Application: The load cells may be used in Class III scales for single cell applications consistent with the model designations, number of scale divisions, and parameters specified in this certificate. Load cells of a given accuracy class may be used in applications with lower accuracy class requirements provided the number of scale divisions, the v_{min} values, and temperature range are suitable for the application. The manufacturer may market the load cell with fewer divisions (n_{max}) and with larger v_{min} values than those listed on the certificate. However, the load cells must be marked with the appropriate n_{max} and v_{min} for which the load cell may be used.

Identification: A pressure sensitive identification badge containing the manufacturer, model designation, and serial number is on the load cell. All other required information must be on an accompanying document including the serial number of the load cell.

Test Conditions: One 50-kg capacity load cell was tested at NIST using dead weights as the reference standard. The data were analyzed for single load cell applications. The cell was tested over a temperature range of -10 °C to 40 °C. Three tests were run on the cell at each temperature. The temperature effect on zero was measured and a time dependence (creep) test was performed. The barometric pressure test was waived due to the insensitivity of the load cell design to changes in barometric pressure.

Type Evaluation Criteria Used: NIST Handbook 44, 1996 Edition

Tested By: NIST Force Group, NIST Office of Weights and Measures

Information Reviewed By: D. M. Ripley (NIST)